

to add on further DCPD result in the formation of oligostructure fractions (structural units II). Oligo-DCPD mixtures are also obtained by polycycloaddition of cyclopentadiene under pressure at temperatures of 5 between 170° and 300°C. These mixtures may be worked up by distillation; preferably, however, they are reacted directly with, for example, maleic anhydride and water to give mixtures of compounds containing the structural units V and/or VI.

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Esterification of these carboxylic acids with, for example, polyfunctional hydroxyl compounds, especially customary and known polyether polyols, leads to polymers (A), especially polyethers (A), containing the 15 structural units I or V and/or II or VI, respectively.

The polyesters (B) for use in accordance with the invention are conventional, solid, saturated and/or unsaturated polyesters obtained by the known 20 polycondensation of saturated and/or unsaturated dicarboxylic acids and/or their anhydrides with polyhydric alcohols. Polyesters (B) normally have a melting point of from 50 to 200°C, preferably from 70 to 120°C, and generally have a very low melt viscosity. 25 They may also contain free hydroxyl groups and acid groups, with hydroxyl numbers of 5-150 and acid numbers of from 2 to 80 mg KOH/g.

In many cases it is also advantageous to start from the esters of the carboxylic acids and to produce the polyesters by transesterification at relatively high 5 temperatures, since such transesterifications in certain cases take place more readily and more rapidly than the direct esterification. Moreover, by using polyfunctional amines, it is also possible to obtain polyesters having amide structures. The use of 10 monofunctional starting materials is possible as well, in order for example to regulate the molecular weight.

If polymer (A) contains structural units I or V and/or II or VI, these structural units need not be 15 present in the polyesters (B).

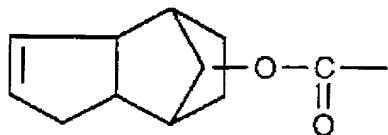
Where the structural units are not used, however, it is mandatory in accordance with the invention for the polyesters (B) to contain maleic and/or fumaric esters 20 incorporated in their main chains.

Of advantage in accordance with the invention, however, are polyesters (B) containing the structural units I and/or II.

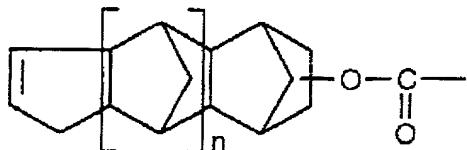
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Compounds which are preferred and readily available are the esterlike DCPD adducts with polycarboxylic acids,

resulting, as a special case of the structural units I and II, in the structural units III and IV:



(III)



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(IV) in which the index n is an integer from 1 to 10.

Adducts particularly easy to obtain are the above-described adducts of maleic anhydride and water with 10 DCPD. The use of such adducts produces particularly preferred unsaturated polyesters (B).

Furthermore, dihydrodicyclopentadienol VII is available commercially and may be used when synthesizing the 15 polyesters (B), thereby likewise introducing the structural units I and II.



(VII)

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